

CLAIMS

1. A gate management method in a gate management system having a gate device installed at a vehicle entrance to a predetermined area and a gate management server managing entrance and exit of a passing vehicle, characterized by comprising:

an identification code reading step of reading identification code information displayed on a terminal moving with the vehicle when the vehicle passes the gate device; and

a passage authorization determination step of determining whether to authorize the vehicle to pass based on the read identification code information.

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2. The gate management method as claimed in claim 1, characterized by further comprising:

a destination determination step of determining a destination of the vehicle in the predetermined area based on the read identification code information at a time of the entrance of the vehicle; and

a destination notification step of notifying the terminal of the destination of the vehicle determined in the destination determination step.

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3. The gate management method as claimed in claim 1 or 2, characterized by further comprising a gate passage notification step of notifying a first communications terminal related to the destination of the vehicle that the vehicle has passed the gate device when the passage is authorized in the passage authorization determination.

4. The gate management method as claimed in any of claims 1 to 3, characterized by further comprising an exit notification step of notifying a predetermined second communications terminal that the vehicle has exited based 5 on the identification code information at a time of the exit of the vehicle.

5. The gate management method as claimed in claim 1, characterized in that the identification code is 10 a barcode, and the identification code reading means is a barcode reader.

6. The gate management method as claimed in claim 1, characterized in that the predetermined area is a 15 port facility, and characterized by further comprising a step of assigning the identification code uniquely to each pick-up order and a step of providing the identification code from the gate management server to the terminal.

20 7. The gate management method as claimed in claim 1, characterized by further comprising a charge amount determination step of determining an amount to be charged for use of the predetermined area based on the identification information read when the vehicle passes 25 the gate.

8. A gate management system having a gate device installed at a vehicle entrance to a predetermined area and a gate management server managing entrance and 30 exit of a passing vehicle, characterized by comprising: identification code reading means for reading identification code information displayed on a terminal moving with the vehicle when the vehicle passes the gate

device; and

passage authorization determination means for determining whether to authorize the vehicle to pass through a gate based on the identification code

5 information read by the identification code reading means.

9. The gate management system as claimed in claim 8, characterized by further comprising:

10 destination determination means for determining a destination of the vehicle in the predetermined area based on the identification code information at a time of the entrance of the vehicle; and

15 destination notification means for notifying the terminal moving with the vehicle of the destination of the vehicle determined by the destination determination means.

10. The gate management system as claimed in claim 8 or 9, characterized by further comprising gate passage notification means for notifying a first

20 communications terminal related to the destination of the vehicle that the vehicle has passed the gate device based on a result of the determination by the passage authorization determination means.

25 11. The gate management system as claimed in any of claims 8 to 10, characterized by further comprising exit notification means for notifying a predetermined second communications terminal that the vehicle has exited based on the identification code information at a time of 30 the exit of the vehicle.

12. The gate management system as claimed in claim 8, characterized in that the identification code is

a barcode, and the identification code reading means is a barcode reader.

13. The gate management system as claimed in
5 claim 8, characterized in that the predetermined area is a port facility, and the gate management server in advance provides the identification code information assigned uniquely to each pick-up order to the terminal.

10 14. The gate management system as claimed in
claim 8, characterized by further comprising charge amount determination means for determining an amount to be charged for use of the predetermined area based on the identification code information read at the time of the
15 vehicle passage.

15. A gate device installed at a vehicle entrance to a predetermined area, the gate device, together with a gate management server managing entrance
20 and exit of a passing vehicle, forming a gate management system, characterized by comprising:

identification code reading means for reading identification code information displayed on a terminal moving with the vehicle when the vehicle passes the gate
25 device;

identification code information transmission means for transmitting the read identification code information to the gate management server; and

passage authorization output means for receiving
30 passage authorization information from the gate management server and outputting the passage authorization information.

16. A gate management server connected to a gate device installed at a vehicle entrance to a predetermined area, the gate management server managing entrance and exit of a vehicle passing the gate device,
5 characterized by comprising:

identification code information reception means for receiving identification code information read from a terminal moving with the vehicle by the gate device when the vehicle passes the gate device;

10 passage authorization determination means for determining whether to authorize the vehicle to pass based on the received identification code information; and

passage authorization information transmission means for transmitting passage authorization information
15 showing a result of the determination of the passage authorization determination means to the gate device.

17. A gate management program to be installed in a gate management server connected via a network to a
20 gate device installed at a vehicle entrance to a predetermined area, the gate management server managing entrance and exit of a vehicle passing the gate device, characterized by causing the gate management server to execute:

25 an identification code information reception process of receiving identification code information read from a terminal moving with the vehicle by the gate device when the vehicle passes the gate device;

30 a passage authorization determination process of determining whether to authorize the vehicle to pass based on the received identification code information; and

a passage authorization information transmission process of transmitting passage authorization information

showing a result of the determination of the passage authorization determination process to the gate device.

18. A recording medium storing a program used
5 in a gate management server connected via a network to a
gate device installed at a vehicle entrance to a
predetermined area, the gate management server managing
entrance and exit of a vehicle passing the gate device,
characterized by storing a gate management program
10 including:
a process of causing the gate management server
to receive identification code information read from a
terminal moving with the vehicle by the gate device when
the vehicle passes the gate device;
15 a process of causing the gate management server
to determine whether to authorize the vehicle to pass
based on the received identification code information; and
a process of causing the gate management server
to transmit passage authorization information showing a
20 result of the determination of the passage authorization
determination process to the gate device.